WHAT IS CLAIMED IS:

1. An ultrasonic diagnostic apparatus for transmitting and receiving an ultrasonic wave with regard to a living body and providing a three-dimensional image of an organ based on the received ultrasonic wave, wherein

a brightness value of each voxel regarding three-dimensional data obtained by a received ultrasonic signal is inverted so as to display a cavity portion of the organ, and a three-dimensional image of the cavity portion of the organ is provided based on the inverted data.

2. An ultrasonic diagnostic apparatus according to claim 1, comprising means for specifying a region of interest with regard to the inverted data, the region of interest being used for extracting the cavity portion of the organ to be observed.

3. An ultrasonic diagnostic apparatus according to claim 1, wherein

before or after inversion of the brightness value of each voxel, the brightness value is binarized.

4. An ultrasonic diagnostic apparatus according to claim 1, wherein

a volume of the cavity portion of the organ is calculated and provided based on the three-dimensional image

of the cavity portion.

5. An ultrasonic diagnostic apparatus according to claim 4, wherein

data for supporting diagnosis is calculated and provided based on a result of the calculation of the volume of the cavity portion.

6. An ultrasonic diagnostic apparatus according to claim 1, wherein

the organ to be observed is a heart.

7. An ultrasonic diagnostic apparatus according to claim 6, wherein

the cavity portion to be observed is the left ventricle.